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# POPULATION & ECONOMY LAND USE SURVEY & ANALYSIS & LAND DEVELOPMENT PLAN



DREXEL, NORTH CAROLINA



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# POPULATION & ECONOMY LAND USE SURVEY & ANALYSIS & LAND DEVELOPMENT PLAN



DREXEL, NORTH CAROLINA

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205/26

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## CONTENTS

	<u>Page</u>
INTRODUCTION	1
 PART I POPULATION	 3
COMPOSITION OF THE POPULATION	4
INCOME, EDUCATION AND HOUSING	5
Income	6
Education	8
Housing	9
 ECONOMY	 
ECONOMIC BASE	11
BASIC AND NON-BASIC INDUSTRIES	12
STABILITY AND DIVERSIFICATION	13
FUTURE EMPLOYMENT	14
LABOR FORCE	15
CONCLUSIONS AND RECOMMENDATIONS	18
 PART II LAND USE SURVEY AND ANALYSIS	 
PURPOSE	20
SCOPE	21
METHODOLOGY	21
SETTING AND SETTLEMENT	22
CRITERIA FOR EVALUATION	23
PRINCIPLES AND STANDARDS OF GOOD URBAN DEVELOPMENT	24





	<u>Page</u>
LAND USE SURVEY	31
Land Use Classification	31
Undeveloped Land	34
Mixed Land Uses	34
Transportation	35
Manufacturing	37
Commercial	39
Social and Cultural	40
Residential	41
Annexation	47

### PART III

#### LAND DEVELOPMENT PLAN

LAND DEVELOPMENT PLAN	
Future Land Use Projections	48
Industrial Development	52
Commercial Development	53
Social and Cultural Areas	55
Residential	56
Annexation Possibilities	58
Major Thoroughfares	60
CONCLUSIONS	61

### TABLES

1	Past and Projected Population Trends for Selected Areas, 1920-1985	3
2	Age and Sex Characteristics of the 1960 Population of Drexel and Drexel Township	5
3	1959 Income Data, Drexel Township, Burke County (All Families)	6
4	1959 Income Distribution for Drexel and Selected Areas	7



		<u>Page</u>
5	1960 Educational Data, Drexel Township and Burke County	8
6	1960 Housing Data for Drexel Township and Burke County	9
7	Comparison of Drexel Township and Burke County Employment Trends with National Trends in Major Industries	12
8	Sensitivity of Non-Agricultural Industries to Changes in the National Business Cycle, Drexel Township, 1960	13
9	Future Employment Projection for Drexel Township and Burke County, 1970-1980	15
10	Employment Status, Drexel Township and Burke County, 1960	16
11	Occupational Distribution of the Labor Force by Sex, Drexel Township and Burke County, 1960	17
12	Estimate of Resident Production Workers Availability, March, 1966	18
13	Drexel Planning Area, Land Use, Acreage and Percentages	33
14	School Site Adequacy, 1965-66	41
15	Housing Density by Type of Unit, Drexel, N.C.	43
16	Housing Types	44
17	Housing Conditions, Drexel, N.C.	45
18	Acreage Projection, Drexel, N.C.	50
19	Acreage Projection, Fringe Area	52



## MAPS

	<u>Follows Page</u>
1 Drexel Planning Area	21
2 Soils Not Suitable for Septic Tanks	22
3 Natural Drainage Basins	22
4 Generalized Existing Land Use	31
5 Average Daily Traffic Volumes	35
6 Areas of Deteriorating and Dilapidated Housing	45
7 Annexation History	47
8 Land Development and Sketch Thoroughfare Plan	48
9 Proposed Annexation Areas	58



# INTRODUCTION







## INTRODUCTION

This report is the first in a series of plans and studies to be prepared by the Drexel Planning Board with technical assistance from the Division of Community Planning, North Carolina Department of Conservation and Development.

A population and economy report usually precedes all other planning work and is a mandatory element in most comprehensive planning programs. A city is only a reflection of the people who dwell in it -- and where there are people there must be ways of earning a livelihood. It is true that people must be provided with streets, water, sewer, schools and recreational facilities, but these activities are secondary as a city's reason for existence. This report will make an analysis of the population and economy of the Drexel area, without which analysis the planning of the city would have to be based on a rather ambiguous and vague framework of assumptions. Questions to be answered are: What kinds of people and how many are to be planned for? What is the size, availability and composition of the labor force? What is the city's potential for attracting new industry? Is the existing industry of a stable and rapid growth nature? How will the future population affect the demand for community facilities? There are many other questions which could be asked, but these will suffice to illustrate the relationship of a population and economy study to general planning. The economic, social and demographic framework must be established before effective planning can ensue.



The first section of this report deals with the population of Drexel and includes such aspects as population growth, age and sex breakdowns, income levels, educational attainment and the quality of housing. The economy of Drexel, the second section of this study, analyzes factors which are important to the economic well being of the city: employment, labor force, trends in manufacturing and so forth. This report will provide information basic to the planning program and will benefit Town officials, local organizations, and the people of Drexel in general.

Since the Bureau of the Census provides very limited information for municipalities with a population of less than 2,500, data for Drexel Township is utilized. The township has basically the same boundaries as the Drexel Planning Area (the corporate limits plus one-mile beyond). Therefore, information presented for the township will give a better understanding of the entire planning area. Information concerning trends in retail sales, agricultural and wholesale was not available at all.

There are no non-white families residing within the corporate limits of Drexel and only one non-white family residing within the township, so there will be no comparisons made between white and non-white families during subsequent analyzation.



# part 1

## POPULATION & ECONOMY





PART I  
POPULATION

The population of Drexel in 1960 was 1,146. This was an increase of 158 over its 1950 population of 988, and an increase of 754 over the 1920 population of 392. Table 1 shows past and projected population trends for Drexel, Drexel Township and Burke County.

PAST AND PROJECTED POPULATION			
TABLE 1 TRENDS FOR SELECTED AREAS, 1920-1985			
Year	Town of Drexel	Drexel Township	Burke County
1920	382	--	
1930	781	1,714*	23,297
1940	881	2,448	29,410
1950	988	2,414	38,615
1960	1,146	2,594	52,701
1965**	1,191	2,601	55,981
1970***	1,241	2,608	59,262
1975	1,292	2,621	62,539
1980	1,343	2,633	65,816
1985	1,394	2,645	69,093

\*1920-1930 Drexel Township was organized from a part of Lovelady Township in 1924.

\*\*Estimated current population

\*\*\*Projected population

Source: U. S. Bureau of the Census  
Projections computed by N. C. Division of  
Community Planning

The table shows that the decade with the highest growth rate was from 1920 to 1930. In each subsequent decade the population has increased at approximately the same growth rate and projections indicate that the town will continue to enjoy the same steady growth rate of 12 per cent. However, there are factors that could cause these projections to fluctuate up or down. For example, the location of a new industry in or around Drexel, or





a sizable annexation program by the town would probably escalate the town's population figures above the projections; conversely, an industry moving out of Drexel would probably cause a decrease in the projected population figure.

As can be seen from the table, the population growth trends of the township have been very erratic. From 1930 to 1940 the population increased 42.8 per cent, but in the decade from 1940 to 1950 the population decreased by 1.4 per cent. It then increased 7.5 per cent from 1950 to 1960. Population projections for the future indicate only a minimal increase. It has been previously pointed out that the township's boundaries are substantially the same as those of Drexel Planning Area. The majority of the Planning Area outside of the town limits is now served by a private water system and this will probably serve as a catalyst to increase the growth rate of the township while minimizing requests from the area for annexation by Drexel.

Burke County has enjoyed a substantial growth in population in each decade since 1920. Population projections indicate that substantial growth will also occur in the future.

#### COMPOSITION OF THE POPULATION

It is necessary to analyze the age and sex characteristics of the Drexel population in order to determine existing consumption patterns, employment and school enrollment and to anticipate those of future years. Census data is not available showing the age and sex characteristics of the Drexel population for 1950, but this information is available for 1960. This lack of census data means that no comparison can be made between these two decades. Also, no trends can be established upon which to predicate future population projections by age and sex characteristics. The analyzation will, therefore, be confined to the 1960 data. Table 2 gives the age and sex groups of the 1960 Drexel and Drexel Township population and percentage within each age group.

The young working force (15-44 years) contained the largest percentage of the population. About 44.3 per cent of the males and 45 per cent of the females are in this group. The lowest percentage group was the retired age group (65+ years) -- 6.1 of both the males and females are in this group. This is very good because it means that these young productive members of the population will not have to support too many older non-productive persons. Due to the minimal increase in population projected for Drexel, no radical shifting within the age groups is anticipated. This also means that school enrollments, consumption patterns, and demand for community facilities will probably increase slightly within the planning period. However, the 65+ age group may increase due to increased life expectancy for older people.



AGE AND SEX CHARACTERISTICS OF THE 1960  
POPULATION OF DREXEL AND DREXEL TOWNSHIP  
TABLE 2 WITH PERCENTAGE OF DISTRIBUTIONS

	Town of Drexel				Drexel Township			
	Per		Per		Per		Per	
	Cent		Cent		Cent		Cent	
	Male	Dist.	Female	Dist.	Male	Dist.	Female	Dist.
Total Population:								
Pre-School (Under 5 yrs.)	50	9.3	59	9.7	129	10.4	146	10.8
School (5-14 yrs.)	110	20.4	114	18.8	281	22.4	294	21.8
Young Working Force (15-44 yrs.)	239	44.3	273	45.0	550	44.2	610	45.2
Older Working Force (44-64 yrs.)	107	19.9	124	20.4	223	18.0	235	17.4
Retired (65+ yrs.)	33	6.1	37	6.1	62	5.0	64	4.8
	539	100.0	607	100.0	1,245	100.0	1,349	100.0

Source: Computed by N. C. Division of Community Planning

Analysis of the table also shows that Drexel Township's percentages are basically the same as those for the Town of Drexel. Therefore, conclusions that were shown for the Town of Drexel are also valid for Drexel Township.

In the Town of Drexel the women comprise 57 per cent of the population, while the men comprise 43 per cent. Drexel Township's population is comprised of 52 per cent female and 48 per cent male. Females outnumbering males can be attributed to the fact that women have a tendency to live longer and that young men are probably more prone to outmigrate to seek employment.

#### INCOME, EDUCATION AND HOUSING

In addition to analyzing population trends, qualitative aspects of the Drexel population such as income, education and housing need examination. Income levels, for example, reflect the community's ability to pay for public facilities and services. Educational attainment, the key to better income and housing, should be studied since it is a very important issue with industries seeking new locations. Housing conditions are, to a



a large measure, dependent upon the income and education of the people in a given area. As can be seen from the above, these qualitative aspects are closely interrelated. The examination of these aspects will facilitate the formulation of plans for the Town of Drexel.

### Income

Income data for the Town of Drexel is not available, so income figures for Drexel Township and Burke County were utilized. Table 3 shows 1959 income data from the 1960 Census for the Township and County by the number of families in each income group.

TABLE 3 1959 INCOME DATA, DREXEL TOWNSHIP, BURKE COUNTY

	<u>Drexel Township</u>		<u>Burke County</u>	
	Total	Per Cent Families	Total	Per Cent Families
All Families	684	100.0	12,479	100.0
Income Group:				
Under \$1,000	20	2.9	824	6.6
\$1,000 to \$1,999	42	6.1	1,058	8.5
\$2,000 to \$2,999	105	15.4	1,735	13.9
\$3,000 to \$3,999	94	13.7	2,074	16.6
\$4,000 to \$4,999	108	15.8	1,810	14.5
\$5,000 to \$5,999	91	13.3	1,597	12.8
\$6,000 to \$6,999	110	16.1	1,206	9.7
\$7,000 to \$7,999	56	8.2	775	6.2
\$8,000 to \$8,999	35	5.1	487	3.9
\$9,000 to \$9,999	15	2.2	270	3.8
\$10,000 and over	8	1.2	633	1.3
Total Family Income	\$3,350,000		\$61,343,000	
Total Personal Income	\$3,597,900		\$65,867,026	

Source: U. S. Bureau of the Census, 1960 Census of Population





The Federal anti-poverty program administrators assume that families with an annual income of less than \$3,000 are living in poverty. They are poverty-stricken because they do not have sufficient incomes to maintain an adequate standard of living. Table 3 shows that 24.4 per cent of the families in the township have annual incomes of less than \$3,000 and the percentage for the County in the same category is 29.0 per cent. However, it should be noted that 57.1 per cent of the township's population is included within the middle income bracket (\$3,000 to \$7,999). This is good because it means that the total income is fairly well distributed. The percentage of Burke County families that all into the same category is 59.8.

Table 4 compares the income distribution for Drexel Township and Burke County with that of Urban North Carolina and the Urban United States.

TABLE 4 INCOME DISTRIBUTION FOR DREXEL AND SELECTED AREAS, 1959

	Urban United States	Urban North Carolina	Drexel Township	Burke County
Mean Family Income	\$7,248	\$5,913	\$4,897	\$4,915
Median Family Income	6,166	4,843	4,750	4,303
Per Capita Income	2,069	1,639	1,387	1,250

Source: U. S. Bureau of Census

It will be appropriate to define the methods used to determine income for these given areas.

Mean Family Income: Total income of all families divided by the total number of families.

Median Family Income: The point at which half the families had more and half the families had less income.

Per Capita Income: Total income of all families and individuals divided by the total population.

In comparing these given areas, Drexel Township's mean income of \$4,897 is substantially below the United States mean income of \$7,248, and slightly below the North Carolina mean income of \$5,913. The Township's median income of \$4,750 is substantially below the U. S. median income of \$6,166, but only slightly below the North Carolina median income of \$4,843. The





Township's per capita income of \$1,387 is also below the United States and North Carolina averages of \$2,069 and \$1,639, respectively. The mean family income for Burke County is higher than the Township's, but the median and per capita incomes are smaller. Probably the reason for the higher median income is that the people with a greater share of the wealth live outside the township. Conversely, the wealth is more evenly distributed in Drexel Township and the majority of the people with less wealth live in the county, thereby lowering the county's per capita and median incomes.

A method which affords a measure of income distribution is to observe the difference between mean and median income. The greater the span between the mean and median incomes, the more uneven the distribution of income. Applying this method to Drexel Township indicates that income is quite evenly distributed because there is only \$147 disparity between the mean and median incomes.

### Education

The education of the citizenry is increasingly mandatory as our society grows more and more complex. Modern industrial processes demand high educational attainment of prospective employees. Table 5 shows the 1960 education figures for Drexel Township and Burke County. It includes only persons who were 25 years old in 1960 and gives the number and percentage of this group by the number of school years they have completed.

TABLE 5                      1960 EDUCATIONAL DATA, DREXEL TOWNSHIP  
AND BURKE COUNTY

	<u>Drexel Township</u>		<u>Burke County</u>	
	Total	Per Cent	Total	Per Cent
Years of School Completed:				
Persons 25 years old and over	1,310	100.0	28,578	100.0
No school years completed	32	2.5	953	3.3
Elementary: 1-4 yrs.	238	18.2	4,275	15.0
5-7 yrs.	360	27.5	8,280	29.0
8 yrs.	142	10.8	2,857	10.0
High School: 1-3 yrs.	237	18.1	4,863	17.0
4 yrs.	203	15.5	4,586	16.0
College: 1-3 yrs.	62	4.7	1,523	5.3
4 yrs. or more	36	2.7	1,241	4.4
Median School Years Completed	8.2		8.1	

Source: U. S. Bureau of Census



Examination of the table reveals that 20.7 per cent of the township's population (25 years and older) can be classified as "functional illiterates" (those who have completed four years or less of formal schooling). Further examination reveals that 10.8 per cent of the township's population have completed eight years of schooling and 15.5 per cent graduated from high school, while 2.7 per cent completed college. The figures for Burke County population in the same categories are 18.3 per cent, 10.0 per cent and 4.4 per cent, respectively. The median school years completed for Drexel Township is 8.2 years. By way of comparison, the median school years completed for Burke County is 8.1, for the State of North Carolina 8.9 years and 10.9 years for the United States.

The low educational attainment figure for the township can be partially attributed to the outmigration of the better-educated persons. If the local economy does not offer jobs for these individuals they may migrate elsewhere to utilize their talents and education.

### Housing

The quality of housing for the local people is largely contingent upon their incomes. Table 5 presents the 1960 housing characteristics for Drexel Township and Burke County.

TABLE 6  
1960 HOUSING CHARACTERISTICS FOR  
DREXEL TOWNSHIP AND BURKE COUNTY

	Drexel Township		Burke County	
All Housing Units	766		14,501	
Owner-occupied	583		9,776	
White	583		9,224	
Non-White			552	
Renter-occupied	159		3,684	
White	158		3,404	
Non-White	1		280	
Vacant	24		1,041	
All Housing Units	766		14,501	
Sound	555		11,202	
With all plumbing facilities	425	72.4%	8,745	77.2%
Lacking some or all plumbing facilities	128		2,457	
Deteriorating	192		2,464	
With all plumbing facilities	115		672	
Lacking some or all plumbing facilities	77	25.1%	1,792	17.1%
Dilapidated	19	2.5%	835	5.8%

Source: U. S. Bureau of Census of Housing



Table 6 reveals that 72.4 per cent of the housing within the township is sound or standard housing, and by combining the deteriorating and dilapidated categories into a new category called "substandard housing" it becomes apparent that 27.6 per cent of the township's housing is substandard. It also shows that 22.8 per cent of the County's housing inventory is substandard and 77.2 per cent is standard. Both the township and the county have a lower percentage of substandard housing than Urban North Carolina (which has a percentage of 28.8 per cent), but markedly higher than Urban United States (average of 18.6 per cent). It is also much lower than the 59 per cent substandard figure for Granite Falls.





## ECONOMY

Since the primary purpose of a town is to furnish its citizens with the means of earning a livelihood, it is impossible to plan for the physical growth of a city without knowing a great deal about the area's economic function. The purpose of this section is to analyze and evaluate the economic base of Drexel.

### ECONOMIC BASE

One method used to determine the degree of development in each local industry is to compare the percentages of total employment in each industry with the percentages of total employment in the same industry group for other areas. Table 7 makes this comparison.

It is apparent from Table 7 that manufacturing is far and away the most developed industry in Drexel Township, as approximately 75 per cent of the total persons employed are in this category. This is approximately three times the United States percentage of people employed in manufacturing. Furniture and textiles are the largest employers. The commerce and professional categories rank second and third in terms of total employment with percentages of 8.9 per cent and 8.7 per cent, respectively. These figures are substantially below the percentages for the United States in the same categories.

Burke County employment is highly developed in the same categories as Drexel Township. However, the total employment in manufacturing is less. Burke County ranks higher in the commerce and professional categories and is more highly developed in mining, construction and agriculture.

It will suffice to say that the economic bases of Drexel Township and Burke County are very dependent on manufacturing activities. These manufacturing activities are dominated by the lumber and furniture group and textile industry. These facts also prove that there is very little diversification in the economic base of both jurisdictions.





COMPARISON OF THE PERCENTAGE OF TOTAL EMPLOYMENT IN  
MAJOR INDUSTRY GROUPS FOR DREXEL TOWNSHIP, BURKE  
TABLE 7 COUNTY AND THE UNITED STATES, 1960

	Per Cent of Total Employment		
	Drexel Township	Burke County	United States
Agriculture	0.7	2.8	6.6
Manufacturing	72.4	54.3	27.1
Lumber, furniture	23.5	18.1	1.7
Primary metals	0	0.1	1.9
Fabricated metals	0	0.1	2.0
Electrical machinery	1.6	3.2	4.7
Motor vehicles	0	0	1.3
Other transportation	0	0	1.5
Other durables	0.3	0.3	2.1
Food products	2.1	2.6	2.8
Textiles and apparel	42.4	28.9	3.3
Printing and chemicals	1.0	0.7	3.1
Other non-durables	0.7	0.3	2.7
Mining and construction	1.6	5.6	6.9
Transportation	1.4	2.6	7.0
Commerce	8.9	12.7	27.0
Personal services	3.1	5.6	6.0
Professional services	8.7	13.6	15.4
Other, or not given	3.6	2.8	4.0

Source: Compiled by N. C. Division of Community Planning from  
U. S. Census of Manufacturing

#### BASIC AND NON-BASIC INDUSTRIES

The industries in any town can be classified into two broad classifications -- basic and non-basic. Basic industries are those that export the majority of their goods or services to other areas, while non-basic or service industries serve mainly the local market. It can be stated generally that the basic industries bring new money into the local area, while the non-basic industries merely circulate money which is already there. Non-basic industries (retail trade, medical, education, etc.) could bring additional money into the local economy if Drexel had a nice shopping center, medical center, or college, but such is not the case.



## STABILITY AND DIVERSIFICATION

Division of the various industries into groups according to their sensitivity to changes in the national business cycle will give some interesting information. This has been done in Table 8.

TABLE 8 SENSITIVITY OF NON-AGRICULTURAL INDUSTRIES TO CHANGES IN THE NATIONAL BUSINESS CYCLE, DREXEL TWP.

	Per Cent of Drexel Township Employment	
<u>GROUP I (Highly Insensitive)</u>		
Communication and utilities	0.3	
Trucking and other transportation	0.6	
Education	2.9	
Medical	4.8	
Public administration	<u>1.0</u>	9.6
<u>GROUP II (Markedly Insensitive)</u>		
Food processing	2.1	
Printing and publishing	1.4	
Business services	0.3	
Finance, etc.	<u>0.0</u>	3.8
<u>GROUP III (Average Sensitivity)</u>		
Wholesale	0.9	
All retail	7.7	
Other personal services	1.0	
Private household	<u>2.1</u>	11.7
<u>GROUP IV (Markedly Sensitive)</u>		
Lumber and furniture	23.5	
Textile and mill products	42.8	
Other non-durables	0.7	
Construction	<u>1.6</u>	68.6
<u>GROUP V (Highly Sensitive)</u>		
Primary and fabricated metals	0.0	
Machinery (including electrical)	1.6	
Other durables	0.3	
Mining	<u>0.0</u>	1.9
Agriculture and others not specified		<u>4.4</u>
		100.0

Source: N. C. Division of Community Planning based on U. S. Census data



Table 8 shows that 68.6 per cent of the total employment is in manufacturing activities that are markedly sensitive to cyclical fluctuation of the national business cycle; however, only 13 per cent are in the highly and markedly insensitive categories. It would seem that the economy of Drexel Township should be somewhat unstable. However, interviews with two leading industrialists (a furniture manufacturer and a textile manufacturer) revealed that at no time during the past ten years, even during periods of national recession, have any workers been "laid off" or put on "short time". Apparently, Drexel Township's plants are not as sensitive to changes in the national business cycle as furniture and textile manufacturing in other areas of the country. Nevertheless, when attracting new industries it would still be advisable to solicit the types that are relatively insensitive to changes in the national business cycle, thereby diversifying the local economic base.

#### FUTURE EMPLOYMENT

Projections of future employment by industry for Drexel Township and Burke County are shown in Table 9.

A minimal increase in total employment is projected for Drexel Township by 1980. During the same period a decline is projected in total employment for the furniture and textile industries. The expected decline is predicated on national trends in automation, competition from abroad, and high material costs. The commerce and professional categories show the largest projected increases.

Once again, based on interviews with local industrialists, it seems this projected decline in total employment is unreasonable. Both industries have increased their total employment about 5 per cent annually for each of the last five years. Those interviewed also stated that they foresee no change in this trend in the next few years. These two industries employ about 1,300 people.

It is also felt that the commerce and professional categories where employment increases are projected will not materialize unless some economic diversification is accomplished. Drexel should form a Chamber of Commerce or an Industrial Development Commission to solicit types of industries that are relatively stable, such as utilities, transportation, finance, and so forth, and this would also provide economic diversification.

It is obvious that the material presented in Table 9 is not in accord with local conditions, but this is the only statistical data available concerning future employment. Data is not available for 1960, so no local trends would be established for Drexel Township for the period 1950-1960.





FUTURE EMPLOYMENT PROJECTIONS BY INDUSTRY FOR  
TABLE 9 DREXEL TOWNSHIP AND BURKE COUNTY, 1970-1980

	Drexel Township			Burke County		
	1960	1970	1980	1960	1970	1980
Total Employed	1,168	1,197	1,273	20,222	21,491	24,487
Agriculture	8	5	3	577	537	221
Manufacturing	845	796	761	10,974	10,162	10,022
Lumber, furniture	274	244	218	3,669	3,273	2,920
Primary metals	0	0	0	36	37	38
Fabricated metals	0	0	0	37	56	85
Electrical machinery }	19	27	39	603	1,035	1,081
Motor vehicles						
Other transportation	0	0	0	5	10	20
Other durables	4	5	6	53	67	85
Food products	24	30	37	519	638	785
Textile & apparel	500	461	425	5,844	4,789	3,991
Printing & chemicals	16	21	28	160	200	266
Other non-durables	8	8	8	63	67	77
Mining & construction	19	21	23	1,027	1,241	1,367
Transportation	12	13	14	530	613	726
Commerce	104	117	131	2,560	2,982	3,498
Personal services	36	41	47	1,126	1,268	1,435
Professional services	102	156	239	2,749	4,205	6,459
Other or not given	42	48	55	519	663	759

Source: Computed by N. C. Division of Community Planning from 1960 Census of Business base figures

The projections also indicate an increase in total employment for Burke County. Furniture and textile jobs are expected to decline. However, considering the current growth trends of these two industries, this projected decline will probably not materialize. Burke County will also need economic diversification for the projected job increases in the commerce, professional mining and transportation to materialize.

#### THE LABOR FORCE

Table 10 provides facts concerning the Drexel Township and Burke County labor force and their composition.

It is obvious that there are more males in the labor force than females, although there are more total females than males 14 years of age and older. Of the 870 males 14 years of age or older, 687 (or 78.7 per cent) are in the labor force, and of these 687, only 8 (or 1.2 per cent) were unemployed. This is a very low unemployment rate.





Of the 908 females in Drexel Township 14 years of age and older, only 499 (55.0 per cent) were included in the labor force. Of these 499, only 8 (or 1.6 per cent) were unemployed. Then too, of the 384 married women employed, 103 had children under six years of age.

The Employment Security Commission figures through June, 1966 showed unemployment percentages of 4.3 and 3 per cent, respectively, for Burke County and the Town of Drexel.

TABLE 10 EMPLOYMENT STATUS, DREXEL TWP. AND BURKE COUNTY, 1960

	Drexel Township	Burke County
Male, 14 and Over	870	17,858
Labor Force	685	12,601
Per Cent of Total	78.7	70.6
Civilian Labor Force	685	12,597
Employed	677	12,386
Unemployed	8	311
Per Cent of Civilian Labor Force	1.2	2.5
Not in Labor Force	185	5,257
Inmate of Institution	0	1,698
Enrolled in School	95	1,657
Other, Under 65 Years Old	52	1,020
Other, 65 Years Old and Over	38	882
Female, 14 and Over	908	19,679
Labor Force	499	8,282
Per Cent of Total	55.0	42.1
Civilian Labor Force	499	8,282
Employed	491	7,936
Unemployed	8	346
Per Cent of Civilian Labor Force	1.6	4.2
Not in Labor Force	409	11,397
Inmate of Institution	0	2,144
Enrolled in School	89	1,650
Other, Under 65 Years Old	267	6,186
Other, 65 Years Old and Over	53	1,417
Married Women in Labor Force		
Husband Present	384	5,780
With Own Children under 6 Years	103	1,685

Source: U. S. Bureau of the Census



## Occupational Distribution

Approximately 65 per cent of the males in the Drexel Township labor force are in the skilled group along with 69 per cent of the females. (See Table 11). This is a relatively high percentage of skilled workers and can be attributed to the fact that the town's dominant industries (textiles and furniture) require skilled workers. Only about 7 per cent of the males and 13 per cent of the females can be classified as unskilled workers. The low percentage in the professional and managerial, and retail sales groups can be attributed to the fact that Drexel Township does not serve as a broad-gauge commercial or trade center for the surrounding area.

Burke County's occupational structure is similar to Drexel Township's, but it does not have a higher percentage of females in the professional and commercial categories. This is true because professional personnel has a better chance of employment in other parts of the county, and also areas other than Drexel Township such as retail trade areas.

OCCUPATIONAL DISTRIBUTION OF THE LABOR FORCE  
TABLE 11 BY SEX, DREXEL TOWNSHIP AND BURKE COUNTY, 1960

	Drexel Twp.	Per Cent Total	Burke County	Per Cent Total
<u>MALES</u>				
Total employed	677	100.0	12,286	100.0
Professional, managerial, proprietary	66	9.7	1,813	14.7
Clerical & sales	76	11.2	1,072	8.7
Skilled workers	437	64.6	6,976	56.8
Unskilled	47	7.0	1,649	13.5
Occupation not reported	51	7.5	776	6.3
<u>FEMALES</u>				
Total employed	491		7,936	
Professional, managerial, proprietary	34	6.9	937	11.9
Clerical and sales	46	9.3	1,314	16.5
Skilled workers	343	69.8	3,858	48.6
Unskilled workers	64	13.4	1,430	18.0
Occupation not reported	4	0.9	397	5.0

Source: U. S. Bureau of Census



### Worker Commuting Patterns

In 1960, Drexel Township had only 51 persons (4.4 per cent) of the total labor force (1,147) commuting to other counties to work. The majority of the outcommuters were employed in Catawba County. This low percentage of outcommuters reflects the current trend of ample opportunities for employment within Drexel Township and Burke County.

### Worker Availability

The Employment Security Commission of North Carolina publishes information with reference to worker availability. It reports that there were in March, 1966, 2,765 employable workers living within a 20-mile radius of Drexel. This estimate does not include all potential workers in the area but only those who would be qualified and willing to accept production-type work in an industrial plant. It should be noted that 2,115 of the total estimate of 2,765 are in the unskilled, inexperienced, but trainable category. Furthermore, each year 995 high school graduates from within a 20-mile radius of Drexel enter the labor force. The following table gives additional data regarding worker availability.

TABLE 12 ESTIMATE OF RESIDENT PRODUCTION  
WORKERS AVAILABILITY, MARCH, 1966

Miles	Total	Total Workers Available		Skilled		Semi- Skilled		Unskilled and inexperienced but trainable	
		Male	Female	Male	Female	Male	Female	Male	Female
Total	2,765	780	1,985	45	15	165	425	570	1,545
0-15	1,750	490	1,260	15	5	80	200	395	1,055
15-20	1,015	290	725	30	10	85	225	175	490

Source: N. C. Employment Security Commission

It will be appropriate at this point to summarize the positive and negative factors affecting the growth of Drexel.





POSITIVE FACTORS for the population and economic growth of Drexel are:

1. A moderate, but steady population growth.
2. A high percentage of the population in the middle-income brackets.
3. A relatively low percentage of substandard housing.
4. A low unemployment rate.
5. Stable, high growth rate industries.

NEGATIVE FACTORS against the population and economic growth of Drexel are:

1. Lack of economic diversification.
2. Low educational attainment.
3. Inadequate labor supply.
4. Lack of central business district.
5. The practice of not extending water and sewer lines outside the town limits.
6. Lack of an organized group to solicit industry and work for the improvement of existing industry.

It is now incumbent upon the citizens, governmental officials and manufacturers to take stock and decide what they want their town to become, then choose the methods needed to accomplish the desired objectives. This report has furnished guidelines for this activity. Action to correct the negative factors and capitalize on the positive factors should be vigorously pursued.





# part 2

## LAND USE SURVEY & ANALYSIS





PART II  
LAND USE SURVEY AND ANALYSIS  
INTRODUCTION

The Drexel Planning Area must have a future land use plan which has analyzed existing land use patterns, housing conditions, transportation and utility systems. This plan, predicated on the previous inventory and analysis, will provide realistic projections of future needs in the aforementioned areas, and establish a pattern for future development. This report will provide a future land use plan for guiding the development of the Drexel Planning Area. It will also provide public officials with a framework for making decisions with regard to the coordinating of public facilities. To the private citizen it suggests the most desirable locations for business or industry and the type of neighborhood in which he can expect to live. For the Planning Board it is an outline of long-term growth by which each proposed new development can be evaluated before recommendations are made to the Town Board.

PURPOSE

This report will have a dual purpose. The first will be to inventory and analyze the present use of land in the Drexel Planning Area, and to evaluate the land use problems that have resulted over the years. Techniques for the amelioration of the problems will also be suggested. Secondly, this report will make realistic estimates of future land use needs and program "functional areas" for these different types of land uses. Principles and standards of good land use planning will be set forth and recommendations will be made in regard to development policies and priorities.

It should be remembered that this is only one of a series of planning studies to be prepared for the Drexel Planning Area by the Town Planning Board with the technical assistance of the Division of Community Planning. To date, the base mapping has been completed thereby providing an accurate up-to-date map of the planning area. The subdivision regulations have been prepared and were adopted in September, 1966. The Population and Economy study is Part I of this report. The community facilities plan, public improvements program and zoning ordinance will be prepared and published in the early part of 1967.



## SCOPE

The scope of this study will be very detailed in regard to the physical characteristics of the planning area. However, utilities, street, schools and other community facilities will be covered only in a general way because a later report (The Community Facilities Plan) will make a detailed analysis of these facilities. The land use plan will have no legal status except to the extent that its recommendations are incorporated into a zoning ordinance. Its recommendations are advisory, not mandatory.

The planning period covered by this study is from 1966 to 1986. However, no planning study can anticipate all of the changes in technology and society that will occur during this twenty-year period. The plan must be reviewed and updated periodically. It should be flexible, but not so flexible that it can be changed for personal whims so that it is rendered ineffective. To be effective it must be accepted by the people of the Drexel Planning Area, because only then can it be utilized as a framework for the making of decisions by public officials and private entrepreneurs concerning future development.

## METHODOLOGY

The Drexel Planning Area was divided into two areas for statistical purposes. The area inside the town limits and the one-mile perimeter outside the town limits. Land use and housing characteristics were gathered in the field and posted to the base map. Also, the acreage for each use was computed and analyzed. Using good planning principles and standards as criteria, existing land uses were evaluated. Land use problems, acreage deficiencies and future land use needs were ascertained. All of the above data will provide the basis for the Land Development Plan. Map 1 illustrates the Drexel Planning Area.







# PLANNING AREA

Drexel  
North Carolina

2285' 0 2285'  
Scale In Feet







## SETTING AND SETTLEMENT

Drexel is located in the central part of the western half of North Carolina, 15 miles west of Hickory and 8 miles east of Morganton. The town lies only one mile from U. S. 64-70 and approximately two miles from Interstate 40. Drexel also lies in the portion of Burke County that is within the Piedmont Plateau, the remainder of the county lies within the Appalachian Mountain Range. The altitude of Drexel is 1,192 feet, while the highest altitude in the county is 4,450 and the lowest altitude is 910 feet.

The soils of the planning area are predominantly of the Madison Sandy Clay Loam and Cecil Clay Loam types. The former abounds in the northern, eastern and western portions of the planning area, while the latter type of soil is found in the southern portion of the planning area. Both types of soils have good permeability and are suitable for septic tank installation. However, it should be noted that Madison soils are sometimes shallow to rock and this could be a limiting factor in the installation of septic tanks. There are patches of Congaree Silty Loam soil to the southeast and west, and septic tank locations are not recommended for these areas because this type of soil has very poor permeability. Map 2 shows areas not suitable for septic tanks.

Drexel is located in the Catawba River Basin, and drainage is primarily northeast toward the river. There are no flood plains or flash flood problems of any consequence; however, it should be pointed out that houses should not be built too close to the numerous streams within the planning area. Map 3 shows the natural drainage of the area to the Catawba River.

Drexel has a moderate climate with few extremes of either hot or cold temperatures. The mean annual temperature is about 59°F and the mean annual rainfall is about 50 inches. The average length of the frost-free growing season is about 192 days. Prevailing winds are from the southwest in Spring and Summer, and from the northeast in Fall and Winter. The average speed of the wind at the earth's surface is about eight miles per hour.

Ground water supplies ranging up to 250,000 gallons per day are available from individual wells. A recent reconnaissance by the District Hydrologist of the Water Resources Commission showed that many of the rocks in the area are fractured, therefore, high-yielding water wells should not be difficult to develop. However, in a few locales the water may contain a high content of iron.



AREAS NOT SUITABLE  
FOR  
SEPTIC TANKS



Drexel  
North Carolina  
2285' 0 2285'  
Scale In Feet







# NATURAL DRAINAGE BASINS



Drexel  
North Carolina  
2285' 0 2285'  
Scale in Feet





## HISTORICAL DATA

Drexel was founded in 1899 on a site where some wagon tracks crossed the railroad. The first industry on this site was a saw-mill. The town was named after a Philadelphia family with large railroad holdings. Drexel Enterprises was founded in 1903, and is still the largest industry in Drexel. Drexel was incorporated as a town in 1913. The settlers of this region were mostly of Anglo-Saxon and Waldesian origin.

## CRITERIA FOR EVALUATION

### ASSUMPTION AND GOALS

As stated previously, there are many unknown factors in planning for the future of the Drexel area; therefore, it is necessary to make certain assumptions concerning growth, then plan ahead, formulating policies and recommendations on the basis of these assumptions. The following assumptions based on data covered in the population and economy section of this report have been made in regard to the Drexel Planning Area:

1. The demand for residential land will increase;
2. the Town of Drexel will institute a progressive annexation program;
3. the Town will initiate a policy of extending utilities to potential growth areas beyond the town limits;
4. population will increase at a greater rate than the projections indicate;
5. the local industries will continue to expand and increase their current high employment rate.

Goals have been formulated for the future physical growth of the planning area. These goals are predicated on previously made assumptions concerning community problems and what will be accomplished to alleviate them. Following is a list of the goals of this report:





- To evaluate existing land uses with planning standards and principles as a criteria.
- To observe the highest standards in housing and community facilities.
- To provide adequate recreational facilities and preserve open space.
- To coordinate the growth of the town with that of the surrounding area.
- To provide for the efficient movement of people and goods through a well-coordinated circulation system.
- To promote public health, safety and general welfare by adopting the necessary codes and ordinances.
- To provide the policies which will achieve the goals and aspirations of the community.
- To promote compatible and harmonious land usage and orderly and sanitary physical environments.

#### PRINCIPLES AND STANDARDS OF GOOD URBAN DEVELOPMENT

There are certain planning principles and standards to which the different types of land uses should adhere. In other words, what are good planning principles and standards for residential land uses may not apply to land that is to be used for industrial or business purposes. For the purpose of this report, land has been divided into six classifications (residential, commercial, industrial, circulation, public utilities and social and cultural). Good planning principles and standards will be listed for each classification. The principles and standards discussed below have been used in this report to evaluate the existing land use patterns and program areas for future land usage.

##### Residential

Locational characteristics for this type of land should possess the following attributes:

- Should be large enough to maintain its integrity as a residential area, but not too large to seem like a neighborhood;
- topography should have enough slope to give the land character and provide good drainage;
- should have easy accessibility to employment, shopping and cultural activities;



- protection should be afforded to the area from heavy traffic and other incompatible land uses.
- residential development should be encouraged within the town limits to make use of existing undeveloped land and to insure that the extension of utilities will not be costly or unreasonable.

## Commercial

Commercial land use in the planning area can presently be divided into two categories: the central business district and strip commercial developments. There are also businesses scattered in the residential areas, but no groupings that could be defined as a shopping center. However, principles and standards will be listed for neighborhood shopping centers.

The central business district should provide --

- adequate and separate circulation systems for vehicles and pedestrians;
- off-street parking and off-street loading facilities;
- adequate land for green space as a means of buffering adjoining incompatible land uses.

Neighborhood shopping centers provide convenience goods such as foods, drugs and personal services. They serve the immediate neighborhood. The following additional qualities should characterize neighborhood shopping centers:

- a site of sufficient area to service the neighborhood and provide off-street parking space;
- access should be readily available by means of major thoroughfares;
- buildings should be grouped so as to operate as one functional unit;
- truck traffic and loading facilities should be separated from customer traffic.

Strip commercial districts usually involve a variety of commercial enterprises located on major arteries. Sites are often inadequate where free-standing units do not form an integrated whole. This type of development tends to lessen the traffic-carrying capacity of the street upon which it fronts. This type of commercial development should possess the following attributes:



- provide only those services absolutely essential to the travelling public;
- be of sufficient size to provide off-street parking and have entrances and exits which do not impede traffic on the major traffic artery;
- clustering of these units is preferable to intermingling them with incompatible uses;
- buffer zones should be provided to protect incompatible land uses.

## Industrial

The areas programmed for industrial use should have the following attributes:

- site should be located on land with a slope of preferably not more than five per cent;
- sites should be easily accessible for plant workers; locations near major highways are essential. Certain types of industries require rail-side location;
- utilities of sufficient capacity;
- off-street loading so as not to congest traffic on surrounding streets;
- prevailing winds should be considered so that dissipation of smoke and odors can be accomplished;
- landscaping and buffer zones should be provided;
- land use should incorporate adequate off-street parking and sufficient allowance for future plant expansion.

## Circulation

A brief definition of each type of street follows, and qualitative features are described.

Local Streets comprise those which are designed only to service the traffic volume of the local area involved. These areas may serve either residential, commercial, or industrial areas.

Collector Streets serve the function implied by their name. Land access should be a secondary function of collectors.





Arterials function to move traffic, and land access should be a secondary function of arterials.

Freeways are high speed roads that are access-free and have grade separation interchanges. Freeways have only one function -- to carry traffic.

The circulation system of Drexel should conform to the following basic principles:

1. Collector, arterial, or freeway-type arteries should follow the boundaries of residential neighborhoods rather than crossing them internally.
2. The circulation system should be coordinated with those of adjoining cities and with the State system of highways.
3. Major thoroughfares carrying opposite flows of traffic should be provided with median strips.
4. Grade separation should be utilized at intersection conflict points, and railroads.
5. Streets and rights-of-way should conform to the following standards:

	<u>Right-of-way</u>	<u>Width</u>
Local streets	50-60 feet	24-48 feet
Collector streets	60-80 feet	40-48 feet
Arterial streets	100-200 feet	48-60 feet
Freeways	150-200 feet	48-60 feet

6. Abutting property on major thoroughfares should be provided with marginal access roads.
7. Major and secondary roads should be landscaped on both sides whenever possible.

### Public Utilities

The qualitative aspects of public utilities change with increasing urbanization. Examples of these changes would be conversion from septic tanks to a public sewerage system and from wells to a municipal water system. Four major categories of public utilities will be discussed.





### Water Supply

1. Water should be free from bacteriological and other contamination.
2. It should be clean, colorless, odorless, and pleasant to the taste and contain a moderate amount of soluble mineral substances.
3. Catchment areas and reservoirs should be reserved well in advance of required development.
4. The water distribution system should assure continuity of service for domestic, industrial and fire fighting purposes.

### Refuse Disposal

1. Kinds and types of refuse to be collected should determine the type of refuse disposal unit utilized.
2. Careful selection of disposal sites will help in minimizing land use conflicts.

### Sanitary and Storm Sewers

1. Sewerage systems should be provided where land is divided into lots of less than one acre.
2. The lines should be of sufficient size and stub outs should be provided.
3. It is desirable to have both sanitary and storm sewers and not a "combined system".
4. Cooperation between governmental jurisdictions is desirable where gravity flow is influenced by the topography of several areas.
5. Storm sewers should be designed so that infrequent storms will not result in flooding.

### Electric Power and Gas

1. Along streets that are to be paved it is desirable to install house connections from underground utility lines to the curb before the street is surfaced.
2. Conductors should be placed in underground conduits, and adequate records should be kept of all underground facilities.
3. Adequate supply and distribution systems should be available for heavy industrial uses.



## Social and Cultural

Schools. The following minimum site requirements have been recommended by the North Carolina Department of Public Instruction:

	<u>Students</u>	<u>Site in Acres</u>
Elementary School	400 or less	10
One-half mile service area	500 to 600	12
	800 (maximum size)	15
Secondary School	400 or less	12
Two-mile service area	500	14
	600	16
	800	20
	1,200	24
	1,400	28

Recreation and Open Space. This category covers playgrounds, playfields, parks, and other open spaces. The following concepts should be adhered to in planning recreational areas:

1. The site should be large enough and properly located for efficient operation and maintenance. It should be quiet, clean, safe and protected from strong winds, heavy traffic, and undesirable developments.
2. Sites acquired in developed areas should entail the least demolition of buildings and dislocation of families.
3. Active recreation areas should be separated according to the age groups that will use them and be easily accessible to the public.
4. Recreational facilities should be combined with school facilities to serve as educational and recreational centers for neighborhoods or groups of neighborhoods.

Public Buildings. This category includes those types of buildings used for the conduct of government and the furnishing of essential public services. They may be constructed and operated by the city, county, state or federal governments, or by a semi-public agency. Some of the qualitative requirements are as follows:



1. Location should be where they function effectively and yet fit into the general plan.
2. Central-type buildings, e.g., city halls and libraries, should be accessible from all parts of the city.
3. The design layout should take into account the future growth of the services furnished, adequate parking, employee facilities, general utilities, public comfort, and aesthetic qualities.





## LAND USE SURVEY

This section deals with existing land use patterns and problems in order to form a basis for further land use and community facilities planning in the Drexel Planning Area. Statistical and geographical information will be presented to show where and how past development has occurred, and where future development is likely to occur. Existing land uses will be evaluated using previously listed principles and standards as criteria. Recommendations and techniques for alleviating the various problems will also be discussed. However, the recommendations regarding new or expanded physical sites will be detailed in the Land Development portion of this report.

In June, 1966, the Division of Community Planning conducted a land use survey of the Drexel Planning Area to obtain information concerning land use and housing conditions. For the purpose of this analysis, existing land uses were divided into five broad classifications and various subclassifications. Map 4 shows the generalized existing land use, and Table 13 gives a detailed breakdown of these existing uses by averages and percentages for the corporate limits and the fringe area.

### LAND USE CLASSIFICATION

The use of land has been classified as follows:

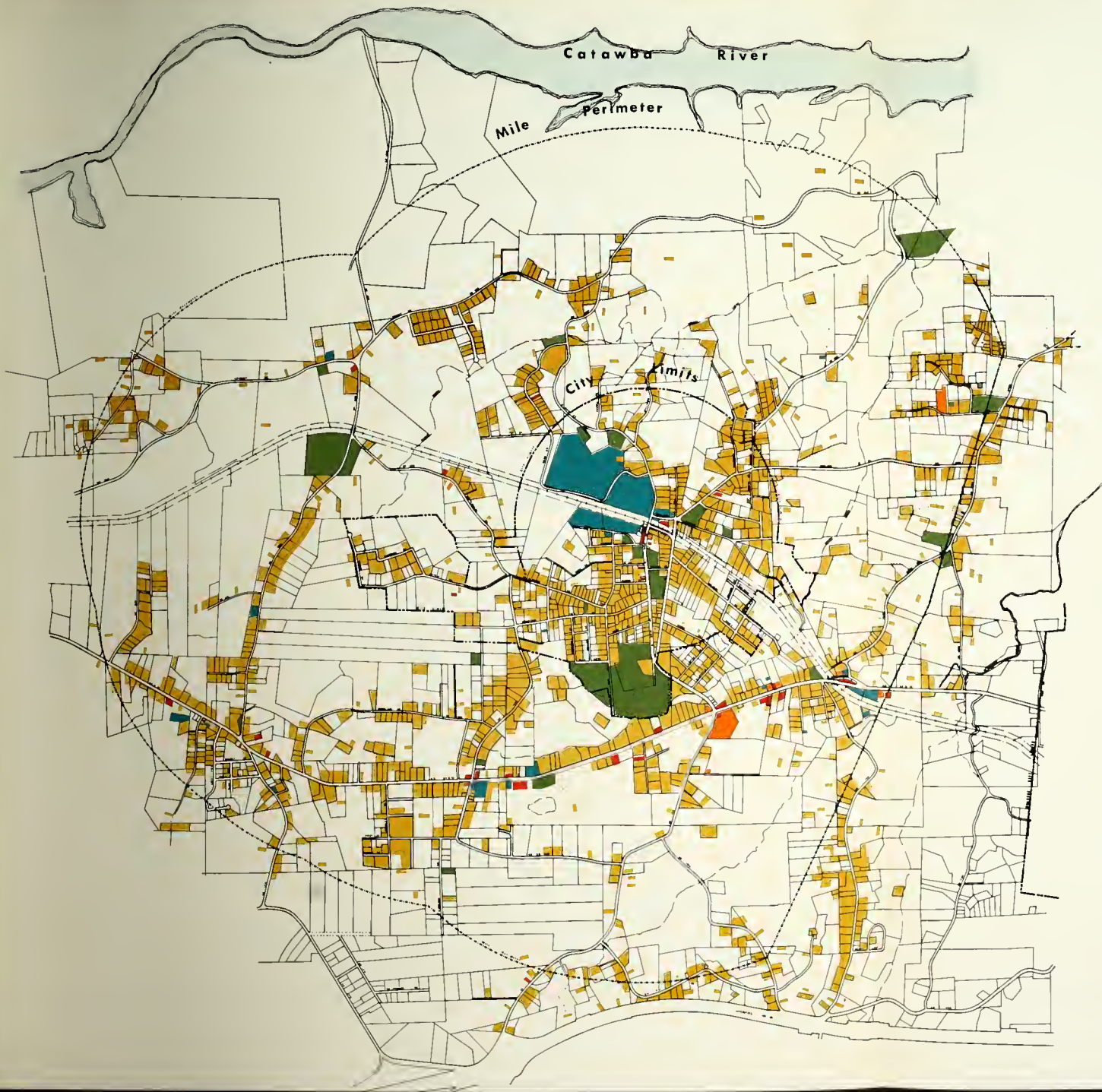
Transportation: Transportation uses were divided into two categories:

Vehicular: Public and quasi-public, rights-of-way, including streets, alleys, roads, railroads; also parking lots and transportation terminals.

Non-Vehicular: Routes or rights-of-way for the transmission of electricity, gas, petroleum, water and sewerage.



GENERALIZED  
EXISTING LAND USE



Drexel  
North Carolina

2285' 0 2285'  
Scale In Feet



LEGEND

- |   |                      |
|---|----------------------|
|  | RESIDENTIAL          |
|  | COMMERCIAL           |
|  | SERVICES             |
|  | PUBLIC & SEMI PUBLIC |
|  | INDUSTRIAL           |





**Manufacturing:** The mechanical or chemical transformation of organic or inorganic substances into new products whether the products are sold back into the manufacturing process or sold at wholesale or retail. Such uses as timber, wood products, furniture and fixtures, textile mill products, chemicals and leather products.

**Commercial:** Commercial uses were divided into two categories and the second category was further subdivided into three categories.

**Retail:** Establishments supplying commodities to the general public at retail prices.

**Services:** Establishments of a business, professional or governmental character which supply general needs of an intangible nature to the public.

**Business Services:** Repair shops such as automobile garages, radio and TV repair shops.

**Professional and Governmental Services:** Doctors, dentists, lawyers, realtors, banks and loan companies, accountants, administrative offices of governmental agencies, and utilities, social welfare organizations.

**Social and Cultural:** Religious establishments such as churches, temples, synagogues, including their customary accessory buildings. Recreation uses such as playgrounds, golf courses, tennis courts and swimming pools.

**Residential:** Structures used as homes for human habitation such as single-family, two-family and multi-family dwellings or apartments, tourist homes and trailer houses.



TABLE 13

	CORPORATE LIMITS		FRINGE AREA		TOTAL PLANNING AREA	
	Per cent of developed acreage	Per cent of total acreage	Acres	Per cent of total acreage	Acres	Per cent of total developed acreage
TRANSPORTATION:						
Vehicular	87.06	20.6	274.47	28.8	361.53	26.3
Non-vehicular	86.66	20.5	273.55	28.7	360.21	26.1
	.40	0.1	.92	0.1	1.32	*
MANUFACTURING:	56.53	13.5	11.31	1.1	67.84	5.0
						1.3
RETAIL:	2.35	0.5	10.65	1.0	13.00	1.0
						*
SERVICES:	4.07	0.9	25.62	2.7	29.69	2.2
Personal	.55	0.1	10.44	1.1	10.99	*
Business	.73	0.2	1.33	0.2	2.06	*
Professional						*
& Governmental	2.79	0.6	13.85	1.4	16.64	1.0
						*
SOCIAL & CULTURAL	54.39	12.9	32.73	3.4	87.12	6.3
Education	15.02	3.6	4.52	0.4	19.54	1.4
Religion & Recreation	39.37	9.3	28.21	3.0	67.58	4.9
						1.2
RESIDENTIAL:						
Single-Family	217.63	51.6	599.17	63.0	816.80	59.4
Multi-Family	207.35	49.2	582.50	61.1	789.85	57.4
Trailer	1.98	0.4			1.98	*
	8.30	2.0	16.67	1.9	24.97	1.8
						*
TOTAL DEVELOPED	422.03	100.00	953.95	100.0	1,375.98	
OPEN LAND	314.37		3,686.15		4,000.52	
TOTAL ACRES	736.40	(1.2 sq. miles)	4,640.10	(7.3 sq. miles)	5,376.50	(8.5 sq. miles)
PER CENT TOTAL ACREAGE						
DEVELOPED	57.3		20.6		25.6	
VACANT	42.7		79.4		74.4	
	100.0		100.0		100.0	

\* Less than 1%

SOURCE: N. C. DIVISION OF COMMUNITY PLANNING, FIELD SURVEY, JUNE, 1966





## UNDEVELOPED LAND

Undeveloped land can be described as land that is farmed or void of development. Within the corporate limits about 314 acres, or 42% of the total acreage, is undeveloped. The majority of this vacant land is located in the northern and western quadrants of the city. This vacant land is primarily in large tracts. However, there are several vacant lots in the southern and eastern quadrants of the city.

Within the fringe area about 3,686 acres, or 79% of the total acreage, is undeveloped. The majority of the fringe area is vacant but the bulk of the urban development of this area has taken place in the southwest and the northwest.

The total planning area (town limits and the fringe areas) contains about 4,000 undeveloped acres, or approximately 74% of the total acreage. It appears that abundant acreage is available for urbanization within the planning period.

## MIXED LAND USES

There is not the mixture of land uses in the Drexel Planning Area that is often found in other communities. Most of the commercial uses are located in or near downtown, and the industrial uses are located in close proximity to the railroad. The residential areas are noticeably free from incompatible uses that can destroy the residential character of neighborhoods. However, there are some areas where there are undesirable mixtures of uses. The most apparent one is the intermixture of business and residential uses along U. S. 64-70.

Within the planning period it is very likely that there will be a significant increase in the mixture of undesirable land uses within the planning area unless firm measures are taken, primarily through a zoning ordinance, to prohibit non-residential uses from creeping into residential areas. This will be especially true in the fringe area because this area is urbanizing rapidly from a residential standpoint and supplementary land uses such as grocery stores, drug stores, and dry cleaning establishments might locate in this area. However, desirable locations will be provided for these uses in accordance with the overall development plan, and this will help to preserve the character of the residential development.



## TRANSPORTATION

This category includes vehicular rights-of-way and parking lots, as well as transmission rights-of-way and facilities for water, sewer, gas and electricity. In Drexel, transportation uses account for 20.5% of the developed acreage; but the streets only utilize 14% of the developed acreage. As a general rule of thumb, cities should not have more than 20 to 25% of the developed acreage devoted to streets. When compared to this general rule, Drexel appears to have been efficiently laid out. Within the fringe area, 28.8% of the developed acreage is utilized by transportation uses, but only 22% is devoted to streets. The fringe area percentage is higher because development is more spread out; hence, it takes more streets to serve this scattered development.

Although Drexel has less than 25% of its total acreage in streets, there are some problem areas that have double frontage lots, deadends, and areas without access. The most prevalent problem appears to be a lack of continuity in the local street system, that is to say, adjacent tracts have been subdivided without an overall coordination of the street system. This condition is illustrated by the area west of Garrison Drive, south of Griffin Street, and north of Pearl Street. This problem also exists in some of the urbanized areas in close proximity to the town limits, particularly the area bounded by First and Second Streets. It is also noteworthy that some of the poorly subdivided areas are of recent vintage. The aforementioned subdivision and street problems can be attributed to the following reasons:

- development is controlled by a traditional gridiron street pattern which does not take advantage of the natural topography;
- lack of subdivision regulations;
- the City up until now did not have a comprehensive plan for its future orderly growth.

The most heavily travelled street is U. S. 64-70, and the busiest intersection is the intersection of South Main Street (N.C. 114). An average of 6,120 vehicles passed by this point during 1965. The busiest thoroughfare within the town limits was South Main Street and its busiest point is at the intersection with the town limits where an average of 3,000 vehicles passed during a 24-hour period in 1965. However, North Main Street (N.C. 114) has an average of only 520 vehicles per day at its intersection with the northern town limits. The two most heavily travelled east and west streets are Oakland Avenue and Mountain View Streets. Map 5 shows major streets and their traffic volumes.





AVERAGE DAILY  
**TRAFFIC VOLUME**  
1965



Source:  
By N. C. Highway Commission





The realignment of certain roads is needed to improve the major thoroughfare system of the planning area. A realignment of N.C. 114 in a southerly direction to Interstate 40 would be a major improvement. This proposed realignment would remove some hazardous curves in the existing road while giving better access to Drexel from Interstate 40. This proposal and the extension of existing roads will be detailed in the Sketch Thoroughfare Plan contained in the Land Development portion of this report.

The downtown area is not a major problem as far as off-street parking is concerned because the industrial uses located there have provided parking -- but additional off-street parking should be provided for other uses. The majority of the businesses located along U.S. 64-70 have not provided sufficient off-street parking.

There are several awkward intersections in town. Prime examples are the intersection of Enon Road and U.S. 64-70, the intersection of N.C. 114 (Main Street) and U.S. 64-70, and the intersection of Oakland Avenue, Garrison Drive, Mimosa Avenue and Hill Streets. These awkward intersections are very dangerous and measures will be recommended to alleviate them.

The transportation category has been analyzed and reveals the following problems:

1. Poor land subdivision practices.
2. Awkward and dangerous intersections on major thoroughfares.
3. Realignment and extension of existing streets needed.
4. Lack of off-street parking in downtown area and along U.S. 64-70.

#### RECOMMENDATIONS:

There are legal tools available to Drexel to help eliminate the problems mentioned.

Zoning. Zoning is an exercise of municipal police power to protect the health, safety and general welfare of the town's people. Zoning is the division of a city into districts within which the height and bulk of buildings, the percentage of a lot that may be occupied by structures, the density of population, and the use of buildings and land for industrial, commercial and residential purposes is controlled. It also provides for sufficient off-street parking spaces.



Drexel's zoning ordinance will be prepared and should be adopted early in 1967. Drexel does not have a population of 1,250, which is the minimum required by State law to exercise extraterritorial zoning jurisdiction, and therefore cannot zone its fringe area. However, efforts will be made in 1967 to get Drexel exempted from this limitation provision by the State Legislature.

#### Subdivision

Regulations. Subdivision regulations may be used by a planning board and the town board as a guide for subdivision development. They are enforced by withholding the privilege of public recordation of plats that do not meet the established requirements for design standards, such as arrangement and width of streets, the depth, width and minimum size of lots, setback and utility easements. Improvement standards include the providing of paved streets, curb and gutter, water and sewerage facilities and the providing of sidewalks. Monumentation standards include an accurate survey of the property, placing of control corners and the requirement that the surveying be done by a registered land surveyor or registered engineer.

Drexel's subdivision regulations have been prepared and were adopted in September, 1966. They should be conscientiously enforced by the Planning Commission.

### MANUFACTURING

About 13.5% of the developed acreage within the town limits is devoted to manufacturing uses. It is a generally accepted rule of thumb that the average town devotes about 10% of its developed acreage to manufacturing uses. It is understandable why a manufacturing city such as Drexel would exceed this average percentage. Some 1.1% of the developed acreage within the fringe area and 5.0% of that within the total planning area are devoted to manufacturing purposes.

All of the manufacturing uses within the town limits of Drexel have developed in a rather compact manner and are located adjacent to the railroad tracks. In the past, manufacturing uses located in close proximity to railroads because such locations were desirable for shipping purposes. The modern trend for industrial uses is toward outlying locations where plenty of land in single ownership is available for one-story plants, expansion, parking and landscaping. However, this trend has not materialized



in Drexel -- and probably will not. This is true because there is a dearth of good industrial sites within the town limits. A major problem is that of access to the existing manufacturing sites and lack of access to vacant parcels.

There is room for expansion of the existing manufacturing uses to the west, but in other directions residential and other uses have been built in such close proximity as to prohibit expansion of the existing manufacturing uses. The roads proposed in the thoroughfare plan will, if built, provide better access to existing manufacturing uses and to these vacant parcels.

The majority of the manufacturing uses within the fringe areas are in the southern portion scattered along and in close proximity to U.S. 64-70. There are no industrial parks. There is abundant acreage suitable for industrial sites within the fringe area, and water is available in all districts except the northern quadrant. Sewerage facilities could be extended to areas within reasonable distance of the town limits. Access to vacant parcels is also better in the fringe areas than within the corporate limits. Rail facilities are available in the eastern and western quadrants of the fringe area. It will suffice to say that the fringe area has as many advantages to offer prospective industrial clients as does the town, but it would be expensive to extend water and sewer lines to scattered industrial plants in the fringe areas. There is no zoning protection in the fringe areas at the present time.

After considering industrial sites and uses within the Drexel Planning Area, the major problems may be set forth thusly:

1. Lack of prime industrial sites within the town limits.
2. Access problems of existing manufacturing uses within the town limits.
3. Lack of good access to vacant fringe area parcels.
4. Local government lacks authority to preserve prime industrial tracts within the fringe areas (no extra-territorial zoning jurisdiction).
5. Lack of local industrial Development Commission.

#### RECOMMENDATIONS

1. Annexation to the north to provide prime industrial sites.
2. Extension of water and sewer services to the northern quadrant of the fringe area.
3. Circulation system needs improvement (specific proposals will be made in the Sketch Thoroughfare Plan).
4. Establish a local Industrial Development Commission.





## COMMERCIAL

### Retail Business

Retail business uses in town occupy only 0.5% of the total developed acreage. Within the fringe area 1.0% of the developed acreage is utilized for retail, and within the total planning area slightly more than 1% is utilized. The bulk of the retail acreage within the town limits is located downtown from south of the railroad tracks to Church Street. There are several "Mom and Pop" grocery stores located in various neighborhoods, though not necessarily at the best locations.

The downtown area contains four retail uses, and the rest of the uses are of a service or governmental nature. This downtown area is characterized by rundown and vacant buildings. There is also a lack of off-street parking; on-street parking is allowed. The desirability of the downtown area is not enhanced by its lack of retail facilities, e.g., a hardware store, jewelry store, and so forth. This is not a land use problem as such, but there must be a variety of retail outlets available to entice customers to come to downtown Drexel to shop.

The majority of the retail uses within the fringe areas are located along U.S. 64-70. It would appear that the majority of the new retail construction within the total planning area has occurred in the fringe area. Development along U.S. 64-70 has been of the ribbon or strip development type, which has a tendency to reduce the traffic-carrying capacity of the street on which it depends for access and success. Some of these businesses have also failed to provide adequate setbacks from the road and off-street parking. Also, there has been no tendency of businesses to cluster. However, it must be remembered that there are certain kinds of businesses that have no inclination to cluster, such as automotive and tourist-oriented businesses.

### Services

This category includes personal, business, professional and governmental services. It accounts for 0.9% of the total developed acreage within the town limits, 2.7% of the developed acreage within the fringe area, and 2.2% of the total planning area. Several service functions have been located in residential neighborhoods, and the intermixing of uses tends to lower the value and desirability of the residential neighborhoods. The service categories have the same basic problems as the retail businesses, e.g., lack of off-street parking, run-down appearance of some buildings, and elongated growth patterns with no tendency on the part of businesses to cluster.





It must be remembered that Drexel's close proximity to Morganton and Valdese substantially reduces the retail and services market for Drexel. However, the "aggressiveness" of the local merchants can determine to a large extent the amount of the business they will get. The local government can only do so much in providing off-street parking and other amenities. Once again, the local merchants will have to display some initiative in refurbishing their businesses and expanding the variety of their retail services.

#### Problems include:

1. Lack of adequate off-street parking in the downtown area.
2. Run-down appearance of some buildings; vacant buildings.
3. Lack of certain retail outlets in the downtown area.
4. No local organized group working for the betterment of retail and business services.

#### RECOMMENDATIONS

1. The town should provide off-street parking on a vacant parcel east of South Main (immediately behind the drive-in bank), and also improve the lot now being utilized for parking north of Church Street. The latter needs grading and should be paved. Parking spaces should be properly laid off within the lot, and both ingress and egress points should be improved and properly marked.
2. Adoption of a zoning ordinance to assure adequate off-street parking; proper setbacks.
3. Organization of a local Merchants Association to lead a course of action regarding variety of retail services to be provided and to improve appearance of some of the buildings.

#### SOCIAL AND CULTURAL

This category of land use occupies 12.9% of the developed acreage within Drexel. This is a fairly high percentage, and shows that emphasis has been placed on facilities that affect the physical and spiritual needs of the community. About 3.4% of the fringe area and 6.3% of the total planning area have been devoted to social and cultural uses. The Drexel Community Center is the largest single user of recreational land (35 acres). The main



building has about 26,000 square feet of floor space devoted to a diversity of recreational uses such as bowling lanes, ping-pong, gymnasium, and game room. A football and baseball field are located on the site, as is a picnic and playfield area. The remainder of the developed acreage in this category is occupied by churches. One commonly accepted standard for measuring the adequacy of the recreational acreage is that of the National Recreation Association which is one acre of park or playgrounds for every 100 persons in its population. Drexel, whose current estimated population is 1,191, has 40 acres devoted to recreation use and exceeds this standard. It should be remembered that the bulk of this acreage is occupied by the Community Center, and can be utilized by the majority of the citizens. However, all of the recreation facilities are concentrated in one place, and other facilities such as small playfields or tot lots should be provided.

The discussion of existing school facilities will be limited to site adequacy; that is, the physical site on which the school is located compared to the student membership. Table 14 sets forth school site adequacy data. Previously listed standards were used when determining adequacy.

TABLE 14 SCHOOL SITE ADEQUACY, 1965-1966

Name of School and Grades	Classrooms	Student Membership	Acreage Available	Minimum Acreage Needed	Apparent Diff.
Drexel Primary (1-4)	13	308	12	10	+ 2
Drexel Elementary and High School (4-12)	19	551 <u>420</u> 971	5	24	-19
Total	32	1,279	17	34	-17

Source: Superintendent of Schools, Burke County

The primary school has adequate acreage, and the combined elementary and high school has a 19-acre site deficiency; however, School Board plans call for the removal of the high school grades from the latter school, and if done this would decrease the acreage requirement. Limited vacant land is available for site expansion to the north and south, but not nearly enough to overcome the present deficiency. It should be noted that both schools are located within the town limits of Drexel but are part of the County School System.





Problems include:

1. The combined elementary and high school is located on an inadequate site.
2. Smaller recreation sites are not provided in some areas of the town.

#### RECOMMENDATIONS

1. That the County School Board expand the site on which the elementary and high school is located, even though the high school portion may be moved elsewhere.
2. That the locations set forth in the Land Development Plan for neighborhood playgrounds be studied by the Town.

New recreational areas may be obtained by the following methods:

- (a) Gift or purchase of land
- (b) Subdivision regulation dedications
- (c) Special tax.

#### RESIDENTIAL

Residential land use is far and away the largest use of land within Drexel, the fringe area and the total planning area. Fifty-one per cent of the developed land within the town limits is occupied by residential uses, and the figures for the fringe area and the total planning area are 63.0 per cent and 49.5 per cent, respectively. These figures show that in each of the areas twice as much land is used for residential purposes as for transportation -- which is the second-ranking use of land.

The directions of residential growth within the town recently have been predominantly east and southwest. Areas of residential growth in the fringe area have been mostly south, southwest and northwest. It should be noted that the majority of growth in the fringe area has been at the outer edges, although some development has occurred adjacent to the town limits to the south. There are more residential structures in the fringe area (862) than in the town limits (387). In addition, there are 42 and 47 trailers in the town limits and fringe area, respectively. This growth in the fringe area has occurred mostly with private wells, but a private water system is now in operation and will probably serve as a catalyst to increase residential construction. Without annexation the town's residential construction will probably be to the north and the filling in of vacant lots in various portions of town.





As has been stated before, the majority of the vacant land to the west should be reserved for industrial growth. The town should encourage annexation and construction within the town by stressing the advantages of the public services it has to offer (water, sewer facilities, garbage collection, and police and fire protection). They also offer about one-third of the cost of installing improvements.

It should be noted that a large number of trailers (42) have located in Drexel in the past few years. The majority of these trailers are located in parks, but many are sited on individual lots. This can lead to the establishment of trailer parks which are not laid out or sanitized. Perhaps the reason for so many trailers in Drexel is the lack of low-income housing. Trailers are helping to fill this void, but they should be regulated by a zoning ordinance.

One of the main goals of city planning is to insure a decent standard of privacy, light and air to the citizens of a community. These amenities are sometimes denied when housing is built too close together. Examination of Table 15 reveals that neither the fringe area nor the town limits are overcrowded. However, it does reveal that trailers are somewhat crowded with a density in the town limits of five per acre.

TABLE 15 HOUSING DENSITY BY TYPE OF UNIT, DREXEL, N. C.

	Number Units	Acreage	Average Number Housing Units per Acre
TOWN LIMITS			
Single-Family	385	207.35	1.8
Multi-Family	2	1.98	1.0
Trailer	42	8.30	5.1
Total	429	217.63	2.6
FRINGE AREA			
Single-Family	862	582.50	1.4
Multi-Family	0	0	0
Trailer	47	16.67	2.9
Total	909	599.17	2.1
TOTAL PLANNING AREA			
	1,338	816.80	2.4

Source: N. C. Division of Community Planning



Housing density is closely related to that of housing types. Table 16 gives a breakdown of housing types.

TABLE 16 HOUSING TYPES, DREXEL, N. C.				
	Single-Family	Two-Family	Multi-Family	Trailer
Town Limits	385	0	2*	42
Fringe Area	862	0	0	47
Total	1,247	0	2	89

\* 1 apartment (4 units)

1 apartment (6 units)

Source: N. C. Division of Community Planning

There would appear to be little or no demand for two-family or multi-family housing in the planning area; however, the demand may grow.

Another important aspect of residential land is that of housing quality. Housing conditions were evaluated for the purposes of this report by a "windshield survey". No attempt was made to conduct a detailed examination of each structures; furthermore, mobile homes were not rated. The following criteria was used to evaluate housing quality:

STANDARD. Structures with only slight visible defects and these are normally corrected during the course of regular maintenance. Examples of slight defects are: lack of paint, small cracks in exterior of chimneys, cracked windows, and broken gutters or downspouts.

DETERIORATING. Structures that need more repair than would be provided in the course of regular maintenance. Such structure has one or more defects of an intermediate nature that must be corrected if the unit is to continue to provide safe and adequate shelter. Examples of intermediate defects are: holes or open cracks; rotted, loose, or missing materials over a small area of the foundation; walls or roof; shaky or unsafe porch steps or railings; several broken or missing window panes; and small areas of broken or loose roofing.

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
RECEIVED 10/10/50

TO THE DIRECTOR  
FROM THE DEPARTMENT OF CHEMISTRY  
SUBJECT: [Illegible]

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DILAPIDATED. Structures that do not provide safe and adequate shelter and in their present condition endanger the health, safety, or well-being of the occupants. Defects are either so critical or so widespread that the structure should be rebuilt or town down. Examples are: holes or open cracks; rotten or loose material (siding, shingles, bricks, concrete, tile, etc.) over a large area of the foundation; sagging floors, walls, or roof; and extensive damage by storms, fire, floods and so forth.

Table 17 gives the number and percentage of houses within each classification for the town limits and the fringe area. Map 6 shows areas of deteriorating and dilapidated housing.

TABLE 17. HOUSING CONDITIONS, DREXEL, N. C.

	Town Limits		Fringe Area		Total Planning Area	
	Number		Number		Number	
	Struc-	Per	Struc-	Per	Struc-	Per
	tures	Cent	tures	Cent	tures	Cent
Standard	248	65.0	479	56.0	727	58.0
Deteriorating	127	33.0	314	36.0	441	35.0
Dilapidated	12	3.0	69	8.0	81	7.0
Total	387	100.0	862	100.0	1,249	100.0

Source: N. C. Division of Community Planning, Field Survey, June, 1966

It can be seen from the table that only 3 per cent of the town's housing is considered unfit for human habitation. The comparable percentages for the fringe area and total planning area are 8% and 7%, respectively. However, all three areas have a high percentage of deteriorating housing, which illustrates the need for a program to require maintenance of these structures. If something is not done, these houses will continue to deteriorate and eventually become dilapidated. The Town of Drexel has adopted various codes which can, if administered properly, insure proper construction of new structures.





# AREAS OF DETERIORATING & DILAPIDATED HOUSING



Drexel  
North Carolina  
2285' 0 2285'  
Scale in Feet  
N





Problems include:

1. Lack of good building sites for residential construction within the town limits.
2. Failure of town to annex.
3. Lack of low-income housing, (including apartments).
4. Lack of controls over placement of mobile homes.
5. Large number of deteriorating structures.
6. No minimum housing codes.
7. No zoning protection for property owners.

RECOMMENDATIONS

1. That the town consider annexing areas programmed in the Land Development Plan. (See page 58.)
2. That the town adopt a zoning ordinance which will control mobile home parks and encourage their development.
3. That the Federally-assisted public housing program be investigated. The public housing is governed by a local housing authority (usually five members appointed by the town's governing body). The authority selects sites upon which public housing will be built, retains architects and engineers to draw up design plans, and awards contracts for the construction of the low-rent units. When the units are available for occupancy, the authority will adopt policies governing admission, continued occupancy and eviction.

Congress has authorized the Public Housing Administration (a part of the Department of Housing and Urban Development) to make Federal loans to local housing authorities of up to 90% of the cost of development. Federal loans will be made to the local authority to aid in preliminary planning, site acquisition and construction. When the project is nearly completed, the local housing authority sells bonds publicly and repays all Federal loans, plus interest. The cost of low-rent public housing is paid for by the rent from the tenants and continuing financial support from the Federal Government to insure the low-rent nature of the program.





The national average weekly family income of families admitted to public housing in 1964 was \$46.69. This figure reflects the fact that low-rent housing derives its tenants from the lowest income groups. Rent for families admitted in 1964, including charges for heat, light, cooking fuels, and other utilities, averaged \$42 monthly. This is probably the best means to provide low-income housing for Drexel. Valdeese, Morganton and Hickory already have public housing projects on the ground.

4. Adoption of Minimum Housing Code. This code would set forth minimum physical standards for occupants of buildings and serve as a guide for condemning houses unfit for habitation. This code would be retroactive and would require the demolition of substandard structures. It also provides for the repair and alteration of substandard structures. This is the most feasible way for Drexel to reduce its inventory of deteriorating and substandard structures. However, the Town Board can order the demolition of dilapidated housing after a public hearing.

## ANNEXATION

Map 7 shows the major annexations by Drexel in the post-World War II period. The first major annexation was in 1950 when the area occupied by the Drexel Community Center was taken into the town limits. The next two annexations occurred in 1960 and 1962 on the west side of town -- the Poteat property and the extension of Mountain View Avenue. Both have been utilized for residential construction. The town has grown in a lateral direction to the west. There is an area east and west of Settlemeyer Road that is boxed in by the town limits. A large portion of this area will be used for industrial sites in the future and should be annexed.

Drexel has not had a very aggressive annexation policy. Many of the areas adjacent to the town have built up, and now the town is surrounded by an urbanized area. If Drexel is to grow, annexation must take place. The town has subdivision authority, and can promulgate the type of growth it desires to annex. Due consideration by the Town Board to the areas programmed in the Land Development Plan for annexation is needed.

The advantages of annexation should be publicized. These advantages are provision of necessary municipal improvements and services, lower insurance and utility rates, a broadened tax base, and increased property values within the town limits, and a desire to provide prime industrial and residential land. These same advantages would apply to the development of vacant land within the town limits, with the added incentive that the town will pay one-third of the cost for certain improvements -- water, sewer, streets, curb and gutter, sidewalks.





# ANNEXATION HISTORY



**Drexel**  
North Carolina

2285' 0 2285'  
Scale In Feet





# part 3

## LAND DEVELOPMENT PLAN





### PART III

#### LAND DEVELOPMENT PLAN

This plan for the growth and development of the Drexel Planning Area represents many hours of study and evaluation on the part of the Planning Board. In designating areas for different types of development, the Board considered the physical characteristics of each area, the availability of city water and sewer services, access to transportation facilities, and the projected need for more space to be utilized by businesses and homes within the planning period.

This Land Development Plan correlates many segments of community growth including residential, industrial, commercial, public and semi-public uses. In order that growth be orderly, efficient and economical, the Land Development Plan indicates which areas should be first to develop for particular uses. Map 8 shows the Land Development Plan and Sketch Thoroughfare Plan for the Drexel Planning Area.

#### FUTURE LAND USE PROJECTIONS

The projection of future land use requirements is not an exact science but is an "educated guess" based on past trends. Land use requirements for the projected population gains are added to the present land use deficiencies, if any, and the net result is the acreage requirement by land use categories for the planning period.

The technique to determine future land use requirement was the "acres per hundred method". Table 18 shows that about 70 acres will be needed to accommodate the 203-person increase in population that is expected for the town by 1985. This increase includes future acreage needs for all land use categories based on the minimal population increase projected. However, 160 acres have been programmed for future land use needs because there is a good possibility that the population increase will be much larger. This will depend upon the willingness of the town to annex. It will be germane at this point to examine each category listed in Table 18 and give specific reasoning why the planned acreage for 1985 is higher than the acreage needed to accommodate the projected population increase by 1985.





# LAND DEVELOPMENT PLAN AND SKETCH THOROUGHFARE PLAN

Drexel  
North Carolina

2285' 0 2285'  
Scale In Feet



- Development  
by Year 1985
- Existing-Proposed
- Development  
after Year 1985
- LECEND
- RESIDENTIAL  
Density:  
Low - Long-Range  
Low to Medium -  
Short-Range  
High - Short Range
- COMMERCIAL  
PUBLIC & SEMI-PUBLIC  
INDUSTRIAL
- THOROUGHFARES  
Minor Thoroughfares  
Major Thoroughfares
- RESIDENTIAL  
COMMERCIAL  
INDUSTRIAL





Transportation. Fourteen acres will be needed to accommodate the expected population increase, but 30 acres have been planned for this category. It is felt that the construction of new streets programmed in the thoroughfare plan will utilize the planned acreage.

Manufacturing. Ten acres are needed to serve the expected population increase, but 50 acres have been planned for use by 1985. Based on interviews with local industrialists it was learned industrial expansion is imminent and the additional planned acreage is needed to accommodate this expected growth.

Retail and Services. These two categories, according to population projections, will need only one-half acre for expansion. However, five planned acres have been allotted for these two categories. This additional acreage should be utilized for the addition of off-street parking and expansion of existing businesses.

Social and Cultural. About 10 acres will be needed to accommodate projected population growth, and this amount is also the planned acreage. The land for construction of a new Town Hall and storage yard, and the provision of additional recreational facilities (tot lots) are included in this category.

Residential. Thirty-six acres are needed to accommodate the projected population increase, but 65 acres have been programmed. It is felt that the programmed acreage is justified because of the large lot sizes that now prevail in the area, and that the population will increase at a greater rate than projected.

Considering all factors, it seems reasonable that 160 planned acres will be needed for future land use needs, or 90 more acres than the 70 acres based wholly on projected population increases.





TABLE 18

## ACREAGE PROJECTIONS, TOWN OF DREXEL, N. C.

	Developed Acres in City	Acres per 100 Pop. Now	Additional Acreage by 1975 101 Pop. Increase 1965-75	Acres Needed by 1985 102 Pop. Increase 1975-85	Planned Acres for Use by 1985
Transportation	87.06	7.30	7.00	7.00	30.00
Manufacturing	56.53	4.70	5.00	5.00	50.00
Retail	2.35	0.19	0.20	0.20	3.00
Services	4.07	0.34	0.30	0.30	2.00
Social & Cultural	54.39	4.56	4.60	4.60	10.00
Residential	217.63	18.27	18.30	18.30	65.00
Total	422.03	35.36	35.36	35.36	160.00

Source: N. C. Division of Community Planning

Table 19 shows that about 26 acres will be needed for the 44-person growth projected for the fringe area by 1985. However, 364 acres have been planned for future land uses. It is realized that this is some 338 acres more than that shown as needed for the projected minimal population increase, but there are factors that can explain this planned acreage. The following discussion of these factors by land use category explains why the planned acreage for 1985 is much higher than the acreage shown as needed to accommodate the projected population increase by 1985.

Transportation. About 7 acres are needed based on population projections, but 12 acres have been planned for this category. It is felt that this much acreage will be utilized by construction of new streets programmed in the thoroughfare plan.

Manufacturing. About .2 of an acre is needed to accommodate the projected population increase, but 190 acres have been programmed. This figure is high because 50 acres of it are adjacent to the town limits and will probably be used by the previously mentioned industrial expansion. Water is now available in the majority of the fringe area and the majority of the programmed acreage has good access. It is felt industrial development will occur in the fringe area and sufficient acreage has been programmed for this growth.





Retail and Services. About 30 planned acres have been allotted for these two categories, although only one-half acre has been indicated as sufficient by the population projections. The majority of new businesses have located in the fringe area and it is felt this trend will continue. There is a good possibility that a shopping center will locate in the fringe area, therefore additional business property has been programmed.

Social and Cultural. Twelve acres have been planned for this category, and only one-half acre is needed for the projected population increase. The category also includes public use, and the majority of the planned acreage will be utilized by the town for a new sewage treatment plant. There is also a good possibility that a new consolidated school may be built in the fringe area, but the location is not definite.

Residential. One hundred and twenty acres have been planned for residential growth, but 16 acres is indicated by the population projections. The addition of the aforementioned private water system will provide an impetus to growth. The majority of the new residential growth has taken place within the fringe area, and in all probability this trend will continue.

Also, the land now developed includes areas of small residential lots, stores without parking, multi-story plants as opposed to single-story plants. The standard and style of development in the next twenty years will use a lot more land than the standard and style used to build the town that exists. All of the above factors show that land use projections can not be based wholly on population but must include growth patterns, provision of utilities, contemplated and known expansions, and street construction. Considering all factors, it seems reasonable to program 524 acres, or about 12% of the total undeveloped acreage within the planning area for development by 1985. The remaining portion of the planning area (3,500 acres) have been programmed for their best use, but will probably not develop until after 1985.



TABLE 19 ACREAGE PROJECTIONS, FRINGE AREA OF DREXEL

	Developed Acres in Fringe Area	Acres per 100 Pop. Now	Additional Acreage by 1975 20 Pop.* Increase 1965-75	Acres Needed by 1985 24 Pop.* Increase 1975-85	Planned Acres for Use by 1985
Transportation	274.47	19.60	3.80	3.80	12.00
Manufacturing	11.31	.81	0.10	0.10	190.00
Retail	10.65	.76	0.10	0.10	20.00
Services	25.62	1.83	0.25	0.25	10.00
Social and Cultural	32.73	2.33	0.50	0.50	12.00
Residential	599.17	42.79	8.40	8.40	120.00
Total	953.95	68.12	13.05	13.05	364.00

\*The low magnitude of these figures can be explained by the assumption that Drexel will annex some of its more built-up fringe areas by 1970 and others by 1980 leaving a minimal net gain in population for the remaining fringe area.

Source: N. C. Division of Community Planning

## INDUSTRIAL DEVELOPMENT

There is only one large existing industrial site within the Drexel Planning Area and additional acreage has been programmed for the future expansion of this site. In addition, another large vacant area has been programmed for future industrial growth. However, zoning is needed to protect these sites. Following is a discussion of the existing and proposed industrial sites.

### Proposed Industrial Sites

Site 1. This industrial site of about 160 acres is located west of North Main Street and runs in a corridor north and south of the Southern Railroad tracks to State Road 1522. This land is very level and the topography should pose no problem. The developed portion of this tract contains about 20 acres and is occupied by a furniture manufacturer and a textile concern. About 120 acres are vacant and can be developed. Accessibility to this area would be greatly enhanced by the construction of the proposed outer loop around Drexel. Water is available to the entire tract, and



sewerage to that portion located within the town limits. Railroad facilities are also available.

Site 2. West of State Road 1712, south of State Road 1525 and east of Overlook Drive lies a site of about 140 acres which has been programmed for future industrial use. This site is level and there are no topographic problems. At the present time, this entire tract is undeveloped. Water is available to the tract, but sewerage facilities are not. Accessibility is provided by the aforementioned streets, and the proposed realignment of State Road 1712 in a southerly direction would improve the accessibility to this site. This location is also in very close proximity to Interstate 40, and would provide Drexel with "prestige industrial sites near a major highway for such uses as wholesaling, warehousing, truck terminals, and inoffensive fabricating or processing plants. It should be noted that there is also some good industrial sites located along Interstate 40 beyond the planning area boundary. However, access to these tracts is limited because Interstate 40 has no marginal access road.

About 240 vacant acres have been programmed for industrial purposes. This should be ample acreage for industrial growth within the planning period. There are advantages in having an abundance of industrial land. This gives the potential investor a diversity of sites from which to select, and it also provides a reserve in the event industrial expansion occurs at a faster than expected rate.

## COMMERCIAL DEVELOPMENT

Commercial development is an integral part of the physical and economic development of Drexel. There are desirable and undesirable locations for the conduct of commercial enterprises. The negative aspects of past commercial development have been covered in a previous section of this report and recommendations for their alleviation have been made. The following paragraphs will discuss the types of businesses and suggested location for each type.





## Community Shopping Areas

This type of business tends to cluster and is suitable for location at major intersections. Examples of these businesses are food and drug stores, barber and beauty shops, dry cleaners and laundrettes. Once again, a zoning ordinance is needed to insure that sufficient off-street parking is provided, adequate setback and side yards are provided, off-street loading and unloading facilities are provided, and that adequate landscaping and buffering are provided. Following is a discussion of the community shopping areas within the Drexel Planning Area.

- Site 1. This site, containing about 5 acres, is the downtown area in Drexel. Its problems were discussed in a previous section and recommendations were made for their alleviation. Approximately 2 acres have been programmed for future business growth, and the majority of this proposed acreage should be used for additional off-street parking.
- Site 2. About 4 acres have been programmed south of the intersections of State Road 1525 and U. S. 64-70. A service station occupies a portion of this site. It is felt that this site could be developed and used as a shopping area by the urbanized areas located in the western quadrant of the fringe area.
- Site 3. The area northeast, northwest, and southwest of the intersection of State Road 1525 and U.S. 64-70 (not to be confused with Site 2 as State Road 1525 has two intersections with U.S. 64-70) is a community shopping area. It is now occupied by a service station, grocery store and restaurant. About 7 vacant acres have been programmed for additional business use and associated parking.
- Site 4. The area located northeast, northwest and southwest of the intersection of South Main Street and U.S. 64-70 is occupied by a grocery store and restaurant. About 8 acres of vacant land is included within this area. Realignment of the southern portion of South Main Street will improve accessibility to the vacant portion of this area.



## HIGHWAY SERVICE AREAS

Businesses of this type are those which tend to locate along major thoroughfares and are automobile oriented. The buildings located in this area are normally freestanding. Examples of this type business are service stations, motels, and drive-in restaurants. Zoning would provide development standards for this type of business. It should also be noted that highway service areas require more land because the buildings are freestanding, and do not usually cluster. The Land Development Plan delineates the following highway service areas within the Drexel Planning Area.

- Site 1. This site is located north and south of U.S. 64-70 in close proximity to Community Shopping Area 2. A portion of it is now occupied by a building supply firm and a monument sales yard. This area includes some substandard housing which could be razed and used for business property. About 3 acres of this area are vacant.
- Site 2. Southeast of the intersection of South Main and U.S. 64-70 is a highway service area. A portion of it is now occupied by a drive-in theater, service station and a mobile home display lot, and a TV repair shop. There is also substandard housing in this area that could be razed and used for business uses. However, this area contains about 7 vacant acres.
- Site 3. This site located south of U.S. 64-70 is occupied by an automobile sales lot and a farm implement company. About one acre of this tract is vacant. About 20 acres of vacant land have been programmed for future business growth within the planning period. It is also felt that the proposed locations for business sites will not impede the movement of traffic on U.S. 64-70.

## SOCIAL AND CULTURAL AREAS

The provision of social and cultural facilities for the Drexel Planning Area is very important to its spiritual, mental, and physical growth. The following treatments will be limited in scope to the discussion of site adequacy of the social and cultural activities since other ramifications such as level of service will be discussed in some detail in the forthcoming Community Facilities Plan.



## School Facilities

The school sites have already been discussed, and Drexel Elementary and High School (combined school) has a site deficiency of about 19 acres. The utilization of two vacant lots to the south would add about one acre to the present site. Short-range school plans call for the construction of a new consolidated school in this area, and the high school portion of the existing school would be transferred to this new plant, thereby reducing enrollment at the existing school and thus reducing acreage requirements.

## Park Facilities

The existing recreational facilities in Drexel are adequate, but there is a lack of neighborhood-type facilities. The following park sites for future utilization have been provided in the plan.

- Site 1. A vacant area of about one acre, adjacent to the cemetery on Boston Street at its intersection with Pearl Street. This will provide the area with a neighborhood-type recreation facility and it should be equipped with swing set, slide, see-saw and similar types of equipment.
- Site 2. A vacant area of almost 4 acres, located south of its intersection of Settlemyer Road and Poteat Street. This proposed facility will give this side of town a neighborhood type facility, and should be equipped with the same kind of equipment as was listed for Site 1.

## RESIDENTIAL DEVELOPMENT

The Land Development Plan illustrates anticipated residential growth during the planning period. In locating and delineating residential areas a number of factors were considered. The suitability of land for septic tanks was examined. Accessibility was given prime consideration, as was the availability of water and sewers.

The Land Development Plan (Map 8) proposed three types of residential development: low-density long-range, lot-to-medium density short-range, and high-density short-range.





Low-Density Long-Range. The areas programmed for this type of development are located in the fringe area and are not serviced by water and sewers. The density of these areas should not be more than two dwellings per acre. This is the maximum allowable density when septic tanks must be utilized. Residential development in this type of area is usually single-family detached. Parts of this area can also be utilized for mobile home parks.

Low-to-Medium Density Short-Range. This type of residential area is located in, and in fairly close proximity to, the town limits. All of the areas are served by water but only the portion located within the town limits is served by sewerage facilities. The type of residential area should have a density of three to four dwelling units per acre, and lot sizes should range from 12,000 to 15,000 square feet. It can be seen on Map 8 that a large portion of this type of residential area is located outside the town limits, but these areas are served by a private water system, and residential construction has been taking place in these areas. This category includes the majority of new housing construction in the Drexel Planning Area and the prime areas for future residential growth are also contained herein. These areas will accommodate single-family detached housing, plus two-family structures.

High-Density Short-Range. These residential areas are usually in close proximity to the center of town, where they will probably develop with a density of 10 to 14 families per acre. Single-family dwellings, duplexes and apartment houses can be expected to develop in this area. The minimum size lot for single-family dwellings should be 10,000 square feet, which is a little high for a high-density area. However, the majority of the vacant lots within the Town of Drexel are of this size. Lots for duplexes and multi-family dwellings would require additional square footage according to a sliding scale. The development pattern in these areas will probably not be in the nature of land subdivision because there is little vacant land available. The majority of new construction will probably take place on existing individual lots. Some of these lots can also be used for the parking of mobile homes. These residential areas are also where the majority of any low-income housing development will take place.



## ANNEXATION POSSIBILITIES

As has been noted, Drexel has not done much annexing in the past. However, there are several areas that should be considered for annexation. They have been categorized as follows:

- Short-Range: Areas that should be annexed in from 1 to 5 years.
- Medium-Range: Areas that should be annexed in from 6 to 10 years.
- Long-Range: Areas that should be annexed in from 11 to 20 years.

All areas within each category have also been assigned a priority which is designated by a number. The areas proposed for annexation are as follows:(Map 9)

### Short-Range

- S-1. An area south of the present town limits along both sides of State Road 1525 extending across U.S. 64-70 approximately 200 feet. Residential development is predominant in these areas.
- S-2. This area is south of the present town limits and extends east from South Main Street to the town limits. It is bounded on the south by Sechrest Creek. All of the developed portion of this area is located on Castle Drive and Myrtle Street.
- S-3. An area north of the present town limits including the residentially-developed portion of Dearborn Street, and two unnamed streets to the east. It also includes some residential development between State Road 1536 and Oakland Avenue.

### Medium-Range

- M-1. This proposed area is south of Areas S-1 and S-2. It is located north and south of U.S. 64-70, and extends west of State Road 1712. There are several businesses and residences in this area, but the majority of it is vacant.





# PROPOSED ANNEXATION AREAS



**Drexel**  
North Carolina

2285' 0 2285'

Scale In Feet



## LEGEND

- SHORT RANGE
- MEDIUM RANGE
- LONG RANGE





- M-2. This area is located north and south of U.S. 64-70, and is east of the S-1 area. It is developed residentially, and includes development along State Road 1523 and First and Second Streets.
- M-3. This area is bounded by the town limits on the east and west, by the Southern Railroad on the north, and on the south by Settlemeyer Road.
- M-4. This area, north of the corporate limits, is bounded on the north by Howard's Creek, on the east by Dearborn Street, and on the south by the corporate limits. The majority of this area is now vacant.

#### Long-Range

- L-1. North of the M-4 area there is located considerable residential development along Propst Road and State Road 1531.
- L-2. This area is located south of U.S. 64-70 and is bounded by State Road 1712 and State Road 1525. This area has been programmed for industrial development in the Land Development Plan.
- L-3. West of the town limits and north of Woodland Circle and east of State Road 1525 is a vacant area that will probably develop residentially.
- L-4. This area is located south and east of the town limits. It is expected to develop residentially, but it should be noted that this area contains the steepest terrain in the planning area and this may handicap development.

It can be assumed that the areas programmed for short-range annexation are sufficiently urbanized so that annexation proceedings could be initiated by the town. However, the areas programmed for medium-range are not urbanized sufficiently to be annexed by the town but could be annexed by petition. The annexation of the M-4 area by petition would provide the town with additional vacant land for industrial and residential sites. The annexing of any of the long-range areas will be contingent upon what is accomplished in annexing the short- and long-range areas.



## MAJOR THOROUGHFARES

The final component of the Land Development Plan is the major thoroughfare plan. This plan for future development will serve to tie all other land uses into a coordinated whole.

The proposed changes in the existing thoroughfare system of Drexel shown on Map 8 are as follows:

1. A center loop has been proposed which will carry traffic around the town without going through urbanized areas. This outer loop will also provide better access to some tracts of land, thereby making it more feasible to develop the outskirts of Drexel. The center loop starts in the east side of town at the intersection of U.S. 64-70 and Enon Road, and runs in a northeasterly direction with Sechrest and crosses Oakland Avenue, then bearing west crosses State Road 1536 to Dearborn Street. It then runs in a southerly direction crossing Williams Road, Powell Road, Main Street, Reed Street, and terminates at the intersection of Settlemeyer Road and Poteat Drive.
2. The realignment of Hill Street in a northerly direction to connect with North Main Street.
3. The extension of Settlemeyer Road in an easterly direction to connect with Mountain View Road, which would be extended to the east to connect with Mimosa Avenue.
4. The realignment of State Road 1713 at its intersection with State Road 1716. This will eliminate a very awkward intersection.
5. The realignment of State Road 1728 at its crossing with the Southern Railroad.

Other existing thoroughfares, which have been programmed as major thoroughfares, such as State Road 1712 and State Road 1529 will require some construction work such as widening and removal of bad curves to bring them up to acceptable standards.

It should be acknowledged that all of the proposed new alignments are of a general nature and do not show the exact locations. Before any construction could begin, more detailed surveys and engineering studies would have to be made.



## CONCLUSIONS







## CONCLUSIONS

The Land Development Plan should act as a guide to the orderly development of the Drexel Planning Area. If it is to be meaningful in guiding day-to-day decisions that will affect the future of the planning area it must be understood and supported by the local citizens. The Land Development Plan must be updated periodically to keep it abreast of changing conditions.

Effectuation of the Land Development Plan is mandatory if the plan is to achieve its objective of guiding development. Several means of effectuation have already been discussed such as a zoning ordinance, subdivision regulations and minimum housing codes. These are legal tools that will permit the city to promulgate the type of growth they desire.

ANNEXATION must be accomplished for many reasons. Perhaps the most important one is to add acreage for industrial and residential growth within the town limits. It is also mandatory if the town wants to grow at an increased rate.

The non-availability of low-income housing is also a problem in Drexel. Public housing has been recommended to alleviate this problem; the permitting of regulated mobile home parks is also a possible solution.

All of the aforementioned problems and programs have been discussed at length elsewhere in this report; however, it was felt that it would be appropriate to summarize them.

Following is a listing by land use classification of recommended short- and long-range projects. Short-range projects should be accomplished in one to six years.

### INDUSTRIAL

#### Short-Range

1. Create an Industrial Development Commission with a goal of attracting new and diversified industry to Drexel.
2. Annex land to the north to provide additional acreage for industry within the town limits.
3. Study the possibility of extending water and sewer facilities to the northern quadrant of the planning area.



### Long-Range

1. Extend sewerage facilities to serve prime industrial tracts within the fringe area.
2. Improve access to existing and proposed industrial sites.

## BUSINESS

### Short-Range

1. Upgrade the existing off-street parking and acquire a parcel of land for off-street parking programmed in this study.
2. Create a local Merchants Association.
3. Campaign to "clean up and fix up" buildings in the downtown trading area.

### Long-Range

1. Work for the establishment of a shopping center.

## SOCIAL AND CULTURAL

### Short-Range

1. Acquire the property for suggested parks and recreation areas.

### Long-Range

1. Develop the suggested park locations in the Land Development Plan.

## RESIDENTIAL

### Short-Range

1. Adopt a zoning ordinance.
2. Adopt Minimum Housing Codes.
3. Annex areas suggested in this report.
4. Work toward public housing to fill the need for low-income housing.
5. Extend sewerage facilities to prime residential areas within the fringe areas.
6. Work for the establishment of regulated trailer parks.



### Long-Range

1. Implement a residential street system properly coordinated with the finally adopted thoroughfare plan.

The above listing of projects is not all-inclusive because there are other facilities and services to be studied, such as adequacy of water and sewer services, police and fire protection. These will be covered in the upcoming Community Facilities Study. However, it is hoped that the above listing of projects will give the impetus needed to start citizens and officials on a program for the betterment of Drexel.







